BULLETIN

OF THE INSTITUTE OF METALS

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INSTITUTE NEWS

Papers for the "Journal"

The cost of publishing papers in the Institute's *Journal* is steadily growing, as is the number of papers submitted, with the result that drastic action has become imperative.

The Publication Committee has had to give serious attention to this problem and, among other measures, has issued some additional instructions to its referees. It is thought that the following extracts from these instructions will be valuable to potential authors of papers.

The Publication Committee believes that the information in the average paper could be presented much more concisely than is usual at present. The attack on padding, repetitive sentences, useless phrases, unnecessary illustrations, and repetition of results in tables and diagrams, must go on with full vigour. But it is also necessary that authors should come straight to the point in their papers, make this point succinctly and, having made it, conclude with the minimum of ado. A sentence or two stating what has been done in the paper, and why, is adequate introduction when the theme of the paper is a familiar one. References provide a sufficient link with previous literature. Only where a new theme is being introduced is a longer introduction necessary.

In the main body of the paper descriptions of straightforward experimental methods, apparatus, specimens, and standard mathematical derivatives, can be severely pruned or even eliminated in cases where good references to the literature can be given. Minor results and deductions, not essential to the main theme, need to be examined carefully to determine whether they deserve their place. Discussions of results should keep to the point and not proliferate into long theoretical speculations.

The Committee realizes that in pressing for these contractions it may be asking for the removal or reduction of features which, by the standards of a more luxurious age, would be regarded as integral parts of a well-written paper. It suggests, however, that this sacrifice can be lessened by making more use of appendices, to be set in small type, for the detailed parts of papers. It believes that in many cases most of the text could be set in this form, leaving only the main points for the body of the paper. This arrangement could also improve the readability of a paper.

Publication of Discussions

Rising costs of production and the increasing number of papers submitted to the Institute have compelled the Publication Committee to consider also whether the available money is better spent on the publication of more original papers than on the printing of discussions held at General Meetings of the Institute. It has recommended—and the Council has agreed—that, for a trial period of one year, discussions shall not be printed in the *Journal*.

Contributions to discussions will therefore not be published during the next 12 months, with the exception of specific criticisms of experimental work or conclusions. Such criticisms of papers published in the *Journal*, whether discussed at General Meetings or not, must be concisely presented, and will be printed with the authors' replies.

Other contributions worthy of publication may still be submitted as "Letters to the Editor".

Reports of discussions at meetings of the Institute will no doubt continue to appear in the technical press.

PERSONAL NOTES

Dr. W. D. Biggs has been appointed a lecturer in the Engineering Department, University of Cambridge.

Mr. M. H. D. Blore has left Sheffield University and taken an appointment with the Atomic Energy Division, General Electric Co., Ltd., Erith.

Mr. G. Boex has retired from the Board of The British Aluminium Co., Ltd. He will continue to act in a consultative capacity.

Mr. P. H. Bowker has left the English Electric Co., Ltd., and is now at the College of Aeronautics, Cranfield.

Dr. P. Brock has left the British Non-Ferrous Metals Research Association to take up an appointment with the U.K. Atomic Energy Authority at Dounreay, Caithness.

Mr. G. Clough has left the Shell Petroleum Co., Ltd., to become Process Metallurgist in the Carmet Division of the Allegheny Ludlum Steel Corp., Ferndale, Mich.

Dr. Philip Cohen has joined Magnetics, Inc., Butler, Pa., as manager of a group conducting research on high-permeability magnetic materials.

Dr. A. H. Cottrell has been appointed Goldsmiths' Professor of Metallurgy in the University of Cambridge as from 1 October next. He succeeds Professor G. Wesley Austin.

Mr. V. Delport, Director of the Penton Publishing Co., Ltd., has been awarded a meritorious services medal by the Institute of British Foundrymen in recognition of his great work for the Institute, over a long period, in both national and international fields.

Dr. K. M. Gardiner has left Manchester University and is now with Atomic Power Projects, Ltd., Whetstone, Leicester.

Mr. N. A. Gjostein has left the Carnegie Institute of Technology to join the staff of the Metallurgy and Chemistry Department of Thompson Products, Ltd., Cleveland, Ohio.

Mr. M. M. Hallett, Managing Director of Chamberlin and Hill, Ltd., has been awarded the Oliver Stubbs Medal for 1958 by the Institute of British Foundrymen in recognition of his contributions to foundry technology.

Mr. W. C. F. Hessenberg has been awarded the Sir Robert Hadfield Medal for 1958 by the Iron and Steel Institute.

Mr. W. G. Hull has left the British Welding Research Association to become Head of the Metallurgical Laboratories of Atomic Power Constructions, Ltd., Hounslow, Middlesex.

Dr. B. H. Kear has left Birmingham University and is now at the T.I. Research Laboratories, Hinxton Hall, Cambridge.

Mr. H. D. Kessler, formerly in charge of the metallurgical research division of Titanium Metals Corp. of America in Henderson, Nev., has been transferred to the Company's newly established product development laboratory in Toronto, Ohio, where he will be head of the new product development division of the technical department.

Mr. L. W. Lindsay-Carl has left A.E.C., Ltd., to join D. Napier and Son, Ltd., Acton.

Mr. N. P. Pinto is now plant manager of the fabrication plant of the Beryllium Corp., Hazelton, Pa. He was previously with the Sylvania–Corning Nuclear Corp.

Professor A. G. Quarrell, Head of the Department of Metallurgy at Sheffield University, has been appointed Pro-Vice-Chancellor of the University for 1958–59.

Mr. P. R. Sperry has been appointed project engineer in the Aluminum Technical Centre of the Metallurgical Research Division, Olin Mathieson Chemical Corp., New Haven, Conn.

Mr. D. E. Starks has left Cambridge University and taken up an appointment in the Development and Research Laboratory of The Mond Nickel Co., Ltd., Birmingham.

Mr. E. Stein has left E. and E. Kaye, Ltd., and is now a Research Investigator at the Fulmer Research Institute, Stoke Poges.

Dr. E. G. West, Technical Director of the Aluminium Development Association, has been appointed Chairman of the Research Board of the British Welding Research Association. He succeeds Professor G. Wesley Austin.

Dr. J. C. Wright has left the Wolverhampton and Staffordshire Technical College on his appointment as Senior Lecturer in Non-Ferrous Industrial Metallurgy at the College of Technology, Birmingham.

PERSONALITIES

Professor Emeritus R. S. Hutton

(Institute of Metals (Platinum) Medallist 1958)

Robert Salmon Hutton was born in London in 1876 and educated at Blundell's School, Tiverton, Devon. In 1894 he went to Manchester to study chemistry at Owens College, gaining a first-class Honours degree in 1897. He then spent

about three years carrying out research, first at Manchester under Professor Arthur Schuster and subsequently with Ostwald in Leipzig and Moissan in Paris.

In 1900 Hutton returned to Manchester, where he remained until 1908 as Lecturer in Electrometallurgy at the Victoria University. During this period he established an active educational and research department which attracted students from both inside and outside the University, several of whom have filled leading positions in industry. For his scientific research he received the D.Sc. degree of Manchester University in 1905. With the late Sir Joseph Petavel, he carried out an extensive investigation with an electric furnace at high pressures. It was at this time that Hutton invented the electric-furnace method of fusing silica and assisted in its industrial exploitation.

In 1908 he resigned his University appointment to join the old-established family business of William Hutton and Sons, Ltd., manufacturing silversmiths and cutlers. During the subsequent years he travelled extensively abroad in building up the firm's export trade. At the same time he was closely associated with experimental work in the silver trade, and particularly in the development of a new process of spoon production.

In 1912 he married Sibyl Marie, daughter of the late Sir

Arthur Schuster, who from 1912 to 1919 was one of the Secretaries of the Royal Society.

Shortly after the war Hutton proposed to the Industrial Fatigue Board the study of metal-polishing processes and collaborated with the Board's investigators in a classical research comprising time and motion study, vocational selection, and training workers at machine metal polishing. The results of this study were published by the Medical Research Council and in the Autumn Lecture of the Institute in 1922.

In 1921 Hutton was appointed first Director of the British Non-Ferrous Metals Research Association. Until 1930 all research work was extra-mural. Nevertheless more than 40 researches were carried out by individual investigators, and one of the most important outcomes of this work was the development, in 1927, of aluminium brass condenser tubes.

Hutton returned to academic life when, in 1932, he was appointed first Goldsmiths' Professor of Metallurgy in the University of Cambridge. Here he supervised an extensive investigation for the Goldsmiths' Company into the tarnishing of silver and the possibilities of preventing it.

Since his retirement from the Chair at Cambridge in 1945, Hutton has been actively concerned with higher technological education as a member of the City and Guilds of London Institute, as a Governor of the Imperial College of Science and Technology, and as a member of the Education Committee of the Goldsmiths' Company, on whose Court he has been a member since 1936, and Prime Warden 1942–43. In addition, he was, from 1945 to 1952, Temporary Director of Research and later a member of the Governing Council of the Design and Research Centre for the Gold, Silver and Jewellery Industries.

Hutton has been active in the affairs of a number of scientific societies. He was an Original Member of the Institute of Metals and served continuously on its Council from 1909 to 1936 (as Vice-President from 1927 to 1934). He was subsequently made a Fellow of the Institute, but was unable to accept nomination as President which was offered him in 1934. He was a Founder Member of the Faraday Society and served on its Council from 1906 to 1914. He was also, in 1902, a Founder Member of the American Electrochemical Society, and, in 1924, of ASLIB (Association of Special Libraries and Information Bureaux), of which he later became President (1942).

Dr. J. H. Hollomon
(Rosenhain Medallist 1958)

Dr. J. H. Hollomon, who has been awarded the Rosenhain medal for 1958, is Manager of the Metallurgy and Ceramics Research Department of the General Electric Research Laboratory, Schenectady, N.Y.

John Herbert Hollomon was born in 1919 and received his scientific education at the Massachusetts Institute of Technology, from which he received his Batchelor and Doctor of Science degrees. After a period of service on the faculty of Harvard University, he served in the U.S. Army from 1942 to 1946, attaining the rank of major. While in the Army, he was chief of physical metallurgy at Watertown Arsenal, where he studied the properties of steels used for guns and armour. He was awarded "The Legion of Merit" for his work in the service.

In 1946 Dr. Hollomon joined the General Electric Research Laboratory, first as Assistant Manager and subsequently as Manager of the Metallurgy Research Department. He has also served as adviser for metallurgical activities at the Knolls Atomic Power Laboratory, and since 1953 has been a member of the High-Temperature Panel of the National Science Foundation. He is a fellow of the American Physical Society and of the New York Academy of Science; he is a trustee of the American Society for Metals and a member of the executive committee of the Institute of Metals Division of the American Institute of Mining and Metallurgical Engineers. In addition, he has been Secretary-Treasurer of *Acta Metallurgica* since it was established in 1952.

Among professional honours, Dr. Hollomon has received the Rossiter W. Raymond award of the American Institute of

Mechanical Engineers in 1946, and the Alfred Noble award of the Combined Engineering Societies in 1947. He is the author or co-author of some forty papers in metallurgical and physical journals and is the author of a textbook entitled "Ferrous Metallurgical Design". He also acts as Advisory Editor for a series of books on "Science and Technology of Materials".

JOINT ACTIVITIES

Sir George Beilby Memorial Awards, 1957

The Administrators of the Sir George Beilby Memorial Fund, representing the Institute of Metals, the Royal Institute of Chemistry, and the Society of Chemical Industry, have made awards from the Fund for 1957, each of one hundred and fifty guineas, to:

B. E. Hopkins, M.Sc., in recognition of his work in physical metallurgy, with special reference to the effect of alloying elements in high-purity iron on the mechanical properties at temperatures covering the tough-to-brittle transition range under tensile and notch-impact conditions.

E. C. Potter, B.Sc., Ph.D., D.I.C., F.R.I.C., in recognition of his work on electrochemistry and the corrosion of metals, with special reference to the internal corrosion of power-

station boilers and the analysis of boiler waters for solutes at great dilution.

Awards from the Fund are made to British investigators in science as a mark of appreciation of distinguished work, particularly in such fields as fuel economy, chemical engineering, and metallurgy in which Sir George Beilby's special interests lay. In general, the awards are not applicable to more senior investigators, but are granted as an encouragement to relatively young men who have done independent work of exceptional merit over a period of years.

The Administrators intend to review the character, frequency, and conditions of awards from the Fund and, without prejudice to the conclusions they may reach, have decided not to consider making any further award until early in 1960.

Mr. B. E. HOPKINS graduated with 1st Class Honours in Metallurgy from University College, Swansea, in 1939. As a research metallurgist at the Development and Research Department of The Mond Nickel Co., Ltd., Birmingham, until the end of 1946, he was concerned among other things with the rates of the pearlitic and intermediate transformations in alloy steels and cast irons, with a special interest in the acicular cast irons then being developed. He obtained the degree of M.Sc. for a thesis on some of this work.

Since 1947 he has been a Senior Scientific Officer, and later a Principal Scientific Officer, in the Metallurgy Division of the National Physical Laboratory, where he has been a member of the group investigating the effect of alloying elements on the mechanical properties of high-purity iron in relation to the general problem of brittle fracture. During 1948 he was seconded as metallurgical liaison officer to the United Kingdom Scientific Mission at Washington, D.C., which involved extensive visiting of research establishments in the U.S.A. and Canada.

OTHER NEWS

Summer School on the Principles and Practice of Non-Destructive Testing

A Summer School on the Principles and Practice of Non-Destructive Testing, intended to benefit Senior and Chief Inspectors from Industry, is to be held at the Manchester College of Science and Technology from 8 to 12 September 1958. This Summer School has been sponsored by the British National Committee for Non-Destructive Testing, of which the Institute of Metals is a member, and is being organized by the Manchester College of Science and Technology, the Manchester Association of Engineers, and the Institution of Engineering Inspection.

Those attending the course are expected to have some basic knowledge of non-destructive testing techniques. The physical background of the subject and the interpretation of test results will be the dominant themes of the course. The total cost of the course is expected to be approximately £18. Accommodation for those attending will be provided in the residential quarters of Hulme Hall. Further details may be obtained from the Organizing Lecturer, Dr. J. H. Lamble, Manchester College of Science and Technology, Manchester 1.

Colloquium on "Arsenic, Copper, &c., in Ores, Iron, and Steel"

The Metallurgical Institute and the Department of Mining and Metallurgy at the University of Ljubljana are organizing a Colloquium on "Arsenic, Copper, and Other Oligoelements in Ores, Iron, and Steel" to be held from 20 to 23 September 1958 at Portorose (Slovenian Littoral). Further information may be obtained from Dr. C. Rekar, Director, Metalurški Inštitut, Jamova cesta 3, Ljubljana, Yugo-Slavia.

British Deep Drawing Research Group

The assessment of the suitability of sheet metal for deep-drawing and related processes has been investigated for a number of years by many organizations in several countries. However, largely owing to lack of effective contact between the various investigators, much of the effort expended appears to have been duplicated or even misplaced, with the result that those in need of guidance are faced with a bewildering variety of testing equipment without any clear or reliable indication of the relative merits of the various testing methods.

In order to correct the situation which has led to this state of affairs, the International Deep Drawing Research Group was formed in 1957 by representatives from several European countries with the object of exchanging information and co-ordinating further research into methods of sheet-metal testing and into other problems arising from the deep drawing of metals. The representatives of Great Britain on this Group have been Mr. G. Murray (Pressed Steel Co., Ltd.), who was Chairman of the Cup-Forming Test Sub-Committee of the British Iron and Steel Research Association, and Mr. J. G. Wistreich (B.I.S.R.A.). The Secretariat of the Group is also being provided by B.I.S.R.A.

As a result of an exchange of views on work which has been carried out to date, the Group has decided that in the field of sheet-metal testing attention shall be concentrated on the Cup Forming Test performed substantially in accordance with a procedure evolved and tested by B.I.S.R.A. in the U.K. and by Jornkontoret in Sweden. While valuable work has been done in the past in Great Britain, it is felt that the present arrangements for fostering research and investigation into the deep drawing of metals should now be more broadly based and extended to cover the interests of all those concerned with the testing and deep drawing of metals. Informal discussions have therefore been held between B.I.S.R.A., the British Non-Ferrous Metals Research Association, the Institute of Sheet Metal Engineering, and the Production Engineering Research Association, as a result of which it was agreed to set up a British Deep Drawing Research Group.

This Group is administered by a joint Research Committee of the sponsoring organizations; B.I.S.R.A. continues to provide secretarial services for the International Group, while the secretarial arrangements of the British Group and its Committee are organized through the Institute of Sheet Metal Engineering.

Membership of the Committee has been drawn primarily from organizations or individuals actively engaged in work relevant to the field of activity and is as far as possible equally representative of producers and users of sheet metal, both ferrous and non-ferrous.

The principal functions of the Group Research Committee are as follows:

To provide a focus for British research and development in the field of the deep drawing of sheet metal and related processes, and to effect liaison with similar bodies in other countries through the I.D.D.R.G.

To encourage the initiation and continuation of fundamental research into methods of assessing the

suitability of sheet metal for deep drawing and related processes, and into other aspects of deep-drawing practice, and in particular to instigate and supervise a programme of co-operative investigations into the use of the Swift test, performed according to I.D.D.R.G. procedure.

The main object of the Research Group will be to encourage wider interest in the investigation of problems relating to deep drawing and to serve as a medium for the dissemination and discussion of results and developments. Membership of the Group is open to all interested organizations and individuals in Great Britain and the Commonwealth on the basis of membership of the Institute of Sheet Metal Engineering. Under the guidance of the Research Group Committee, the Group will be responsible for the publication of papers and the organization of meetings in relation to its activities.

Anyone interested in joining the Group or obtaining further particulars is invited to communicate with the Hon. Secretary of the British Deep Drawing Research Group, The Institute of Sheet Metal Engineering, John Adam House, Adelphi, London, W.C.2.

APPOINTMENTS VACANT

APPLICATIONS are invited for posts on the scientific staff of this Research Company. Successful candidates will be appointed initially to assist one of the Senior Metallurgists, but will have specific responsibility for a research project, and will be helped by assistants. Superannuation. Honours degree. Write stating age, salary required to: General Manager, British Oxygen Research and Development, Ltd., Deer Park Road, London, S.W.19.

METALLURGIST

required by the English Electric Co., Ltd., Guided Weapons Division, Stevenage. Knowledge of A.I.D. procedure essential and experience in light alloys or steel castings desirable. This is a senior post.

Please write giving full details of experience and qualifications to Dept. C.P.S., 336/7, Strand, W.C.2, quoting Ref. JM1314B.

METALLURGIST or CHEMIST with University degree or equivalent required for research and development work on metal-arc welding of ferrous materials. Some knowledge of welding an advantage but not essential. Excellent working facilities. Apply in writing to: Research Manager, Murex Welding Processes, Ltd., Hertford Road, Waltham Cross, Herts.

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(*a*) Male Junior Technical Assistant, L.I.M. or O.N.C. standard with practical experience of mechanical testing duties.

(*b*) Male Junior Technical Assistant aged about 35 years, L.I.M. or O.N.C. standard, having previous experience on both ferrous and non-ferrous failure investigations.

Applications should be addressed to DEPT. C.P.S. 336/7, Strand, London, W.C.2, quoting reference JM714B.

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